

**PENGEMBANGAN MEDIA PEMBELAJARAN *FLIPBOOK*
BERBANTUAN *PhET SIMULATION* MATERI CAHAYA DAN SIFATNYA
UNTUK MENINGKATKAN HASIL BELAJAR IPA SISWA KELAS V
SEKOLAH DASAR**

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ABSTRAK

Penelitian ini bertujuan untuk mengembangkan media pembelajaran *flipbook* berbantuan *PhET Simulation* untuk meningkatkan hasil belajar IPA siswa kelas V Sekolah Dasar. Adapun penelitian ini mempunyai empat tujuan yakni: (1) menghasilkan rancang bangun media pembelajaran *flipbook* berbantuan *PhET Simulation* untuk siswa kelas V Sekolah Dasar, (2) menganalisis validitas media pembelajaran *flipbook* berbantuan *PhET Simulation* untuk siswa kelas V Sekolah Dasar, (3) menganalisis kepraktisan media pembelajaran *flipbook* berbantuan *PhET Simulation* untuk siswa kelas V Sekolah Dasar dan, (4) menganalisis efektivitas media pembelajaran *flipbook* berbantuan *PhET Simulation* materi cahaya dan sifatnya untuk siswa kelas V Sekolah Dasar. Subjek penelitian ini adalah *flipbook* berbantuan *PhET Simulation* dan objek penelitian adalah validitas, kepraktisan dan efektivitas *flipbook* berbantuan *PhET Simulation*. Penelitian pengembangan ini menggunakan model ADDIE yang terdiri dari lima tahapan yakni: (1) analisis, (2) perancangan, (3) pengembangan, (4) implementasi, (5) evaluasi. Instrumen yang digunakan untuk pengumpulan data yaitu lembar rating scale dan lembar angket/kuesioner. Hasil penelitian menunjukkan bahwa : (1) media pembelajaran *flipbook* berbantuan *PhET Simulation* yang telah dihasilkan memperoleh indeks validitas sebesar 4.8 dengan kualifikasi validitas isi tinggi. (2) materi pada media pembelajaran *flipbook* berbantuan *PhET Simulation* memperoleh indeks validitas sebesar 4,9 dengan kualifikasi validitas tinggi, (3) respon siswa terhadap media pembelajaran *flipbook* berbantuan *PhET Simulation* adalah sebesar 4,91 dengan kualifikasi sangat baik sedangkan respon guru memperoleh rata-rata 5 dengan kualifikasi sangat baik, dan (4) nilai signifikansi (*2-tailed*) pada uji-t berkolerasi memperoleh skor sebesar 0,001 atau $p < 0,05$ (taraf signifikansi 5%), sehingga media pembelajaran *flipbook* berbantuan *PhET Simulation* yang telah dikembangkan, dinyatakan valid, praktis, dan efektif dalam meningkatkan hasil belajar siswa, sehingga layak untuk digunakan dalam kegiatan pembelajaran.

Kata Kunci: Media Pembelajaran, *Flipbook*, Hasil Belajar, Cahaya dan Sifatnya, IPA, Sekolah Dasar.

**DEVELOPMENT OF FLIPBOOK LEARNING MEDIA ASSISTED BY PhET
SIMULATION LIGHT MATERIALS AND THEIR PROPERTIES TO
IMPROVE SCIENCE LEARNING OUTCOMES OF GRADE V
ELEMENTARY SCHOOL STUDENTS**

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ABSTRACT

This research aims to develop flipbook learning media assisted by PhET Simulation to improve the science learning outcomes of grade V elementary school students. The research has four objectives, namely: (1) to produce the design and construction of PhET Simulation-assisted flipbook learning media for elementary school V students, (2) analyze the validity of PhET Simulation-assisted flipbook learning media for elementary school grade V students, (3) analyze the practicality of PhET Simulation-assisted flipbook learning media for grade V students of Elementary School and, (4) analyze the effectiveness of PhET Simulation-assisted flipbook learning media of light materials and their properties for grade V elementary school students. The subject of this study is the PhET Simulation-assisted flipbook and the object of the research is the validity, practicality and effectiveness of the PhET Simulation-assisted flipbook. This development research uses the ADDIE model which consists of five stages, namely: (1) analysis, (2) design, (3) development, (4) implementation, (5) evaluation. The instruments used for data collection are rating scale sheets and questionnaire sheets. The results of the study show that: (1) the PhET Simulation-assisted flipbook learning media that has been produced obtained a validity index of 4.8 with a high content validity qualification. (2) the material on the PhET Simulation-assisted flipbook learning media obtained a validity index of 4.9 with a high validity qualification, (3) the students' response to the PhET Simulation-assisted flipbook learning media was 4.91 with very good qualifications while the teacher's response obtained an average of 5 with very good qualifications, and (4) the significance value (2-tailed) in the correlated t-test obtained a score of 0.001 or $p < 0.05$ (significance level of 5%), so that the PhET Simulation-assisted flipbook learning media that has been developed, is declared valid, practical, and effective in improving student learning outcomes, so that it is suitable for use in learning activities.

Keywords: *Learning Media, Flipbook, Learning Outcomes, Light and Its Nature, Science, Elementary School.*